```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                           Database
                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  900
  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                            Score
 Match Length DB
                                                                                                                                                                                                                                                   %
Query
  BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                         SwissProt_39:*
                                                                                                                                                                                                                                                                                                                                                                                     88757 seqs, 32294092 residues
                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-331-631A-5_COPY_145_210
375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                March 1, 2001, 16:16:49; Search time 91.75 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                       KRDPQQREYEDCRRHCEQQE.....PQRGGSGRYEEGEEKQSDNP
 KNQI_YEAST
CBP_HUMAN
TRX_DROVI
INVO_RAT
L100_ADE05
PAB2_BA7TH
SG1_BOVIN
ANDR_CANFA
ZAN_PIG
CBP1_CAEEL
DNAA_STRCO
                                                                                  ANDR_PANTR
TRHY_HUMAN
INVO_AOTTR
ANDR_HUMAN
TAGB_DICDI
GLT_DROME
RIT4_NEUCR
LP61_EXTE
SNF5_YEAST
SSN6_YEAST
FY2AST
FY2AST
CAGG_MIVFP
GAG_MIVFP
                                                                                                                                                                                   INVO_SAGOE
BLSA_HUMAN
GLB1_MATZE
                                                                                                                                                                                                       VCLB_GOSHI
VCLA_GOSHI
GLH1_CAEEL
INVO_CEBAL
                                                                                                                                                                                                                                            IJ
                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                 (without alignments)
23.231 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                        88757
Q28983
P18175
P34545
P27902
                                                             P26805
P53894
Q92793
Q24742
                                                                                                              P24712
Q02832
Q12832
Q17775
Q07283
P24708
P10275
P10275
P134383
P283438
P283438
P283438
P15714
P18480
P18480
                                          P24933
P42731
                                                                                          Q04088
P39881
                                                                                                                                                                                                               P09801
P09799
P34689
                            091190
                                                        P48998
                                                                                                        P30803
                                                                                                                                                                                                         P24709
                                                                                                                                                                                                                                           Description
                                                                                        0 saccharomyc
2 saccharomyc
3 canis famil
8 arabidopsis
Canis famil
                                                                                                                                         dictyosteli
drosophila
       sus scrofa
sus scrofa
caenorhabdi
                                                             friend muri
saccharomyc
homo sapien
drosophila
                                                                                                                                                                            saguinus oe
homo sapien
zea mays (m
pan troglod
                                                                                                                                                                                                                    gossypium l
                                          human adeno
arabidopsis
                                                                                                                                  neurospora
                                                                                                                                                                                                        caenorhabdi
cebus albif
                            bos taurus
canis famil
                                                       rattus norv
                                                                                                                            eimeria ten
                                                                                                                                                              homo sapien
aotus trivi
```

streptomyce

γQ В

> 49 82

140 RKQQCVRECRERYQENPWRREREEEAEEEETEEGEQEQSHNP 181

Qy Db	M B Q	DR DR DR SQ	388888888	CC CC CC RT R R R R R R R R R R R R R R	DE DT OCC	RESU	
82 3	Query Ma Best Loo Matches	EMBL; N PIR; A HSSP; I INTERPI PFAM; I Seed st SIGNAL CHAIN SEQUEN	This SWIS between the Europ use by modified entities or send a	SEQU Chla "Dev "Dev germ the Plan -!-	VCLB P098 01-M 01-M VICI Goss Euka Magn	GOS	335 335 335 335 335 335 335 335 335 335
DPQQRET	atch	EMBL; M16891; PIR: A30838; HSSP; P50477; INTERPRO; IPR FFAM; PF00546 Seed storage SIGNAL CHAIN CHAIN SEQUENCE 58	This SWISS-PROT between the Sw the European Bid use by non-pro modified and th entities require or send an email	(1) SEQUENCE FROM N SEQUENCE FROM N Chlan C.A., Py1 "Developmental germination. V the storage pro Plant Mol. Biol	JB_GOSHI J801; -MAR-1989; -MAR-1989; -JUL-1999; ILIN C72; ILIN C72; ISSYPIUM P Caryota; gnoliophy vales; N	11	\$\text{0} & \text{0} &
YEDCRRI   : ::  YEECQQI	Similarity 5; Conservat	80 7 0 m	IISS-PROT en the Swiss opean Bioin non-profied and this is requires is requires	FROM N.A. Pyle J ental bio on. XVIII ge protei ge Biol. 7. TON: SEED LLULAR LO S. S. CILIU, CO CILIN, CO	(Rel.) (R	}	17.5 17.5 17.5 17.5 17.5 17.3 17.3 17.3 17.1
DPQQREYEDCRRHCEQQEPRLQYQCQRRC    :  : : :    : :    DQRR-YEECQQECRQQEERQRPQCQQRC	32. 34.	FWCNAB. ; 1CAX. ; 1CAX. ; 1CAX. R001113; 6; Seedstore. 5 protein; Sic 1 25 26 588 88 AA; 69729	entry is cop ss Institute informatics fit institu s statement ts a license to license	SEQUENCE FROM N.A. Chlan C.A., Pyle J.B., Legocki Chlan C.A., Pyle J.B., Legocki Perein Family of Segrmination. XVIII. CDNA and am the storage protein families."; Plant Mol. Biol. 7:475-489(1986-i-FUNCTION: SEED STORAGE PROTICE SUBCELLULAR LOCATION: COTYL BODIESi- SUBCELLULAR CONGLYCININ, ETCONVICILIN, ETCONVICILI	TANDARD; . 10, Cr . 10, La . 38, La . 38, La . 38, La . 00, La . 10, La . 10, La . 10, La . 10, La		758 1344 1382 1462 1462 157 469 693 895 529 536
RLQY   : RQRP	ωω ** ** -	1; signal.	cop tute ics titu ent ent nse nse	try and lies 89(1 GE F CC: CC	eate st s st a LPHA nd c nd c ; Em		
Ţ.,	Score 121; Pred. No. :	1. VICILIN 63E69	br osh	ocki A.B., Dure L. III; y of cottonseed embryogenesis and nd amino acid sequences of the membe es."; (1986). PROTEIN. COTYLEDONARY MEMBRANE-BOUND VACUOLAR SEED STORAGE PROTEINS (PHASEOLIN, N, ETC.).	VCLB_GOSHI STANDARD; PRT; 588 AA. P09801; 01-MAR-1989 (Rel. 10, Created) 01-MAR-1989 (Rel. 10, Last sequence update) 15-JUL-1999 (Rel. 38, Last annotation update) VICILIN C72 PRECURSOR (ALPHA-GLOBULIN B). Gossypium hirsutum (Upland cotton). Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Magnoliophyta; eddicotyledons; core eudicots; Rosida Malvales; Malvaceae; Gossypium.	ALIG	YM38_YEAST IF3A_MOUSE IF3A_HUMAN NKCR_HUMAN NKCR_HUMAN NKCR_HUMAN NKCR_HUMAN NKCR_HUMAN NKCR_HUMAN NACHGR NRCPACME CAUP_DROME ANDR_MACFA INVO_MOUSE GAG_MLVDD GAG_MLVDE GAG_MLVDE GAG_MLVF5
QEQQ       	121; DB No. 2.7e matches	72. 29AE		B., Dure ttonseed o acid se O acid se O acid se ONARY MEM	update) on updat IN B). ta; Trac eudicot	, i	YEAST MOUSE HUMAN HUMAN SCHGR SCHGR DROME DROME DROME DROME MACFA MOUSE LVDU LVDU LVDE
Q       QQSQRQF	B 1; e-05; 16;	88ADEB (	ו סידום י	B L. III; d embryogenes sequences of EMBRANE-BOUND PROTEINS (PH	A. te) te) cheoph; ts; Ro:		
RQH :     FQECQQH	Length 5 Indels	CRC64;	thr d th no cont	genesis of the sound Va	O .		\ QFQFQFQFQFQFQFQFQFQFQFQFQFQFQFQFQFQFQF
RQHGRGGDLMNPQ :   :  : :QQHCHQQE-QRPE	588; ls 40;		ough a colla e EMBL outs restrictions ent is in and for co isb-sib.ch/a	and e membe	Spermatophyt; eurosids I		Q03825 P23116 P23116 Q14152 Q14152 Q24535 Q2535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q2453 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q2453 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q24535 Q2535 Q2535 Q2535 Q2535 Q2535 Q2535 Q2535 Q2535 Q2535 Q2535 Q255 Q25
E · Q	; Gaps		collabo outsta tions in or com	rs of	phyta; ds II;		saccharomyc mus musculu homo sapien homo sapien schistocerc drosophila drosophila macaca fasc mus musculan murine leuk friend muri
39	s 6;		laboration atstation atstation ons on its on no way commercial l/announce/	I I V			charomyc s musculu no sapien no sapien no sapien sophila spophila musculu spophila musculu spophila musculu spophila musculu spophila spop

```
RESULT 2
VCLA_GOSHI
ID VCLA_GOSHI
AC P09799;
DT 01-MAR-1989
DT 01-MAR-1999
DR 1NTERPRO; 1
DR PFAM; PFO0E
ET CHAIN
SO SEQUENCE
 AC DT DT DT DT RR RR RR RR
                                                                                                                                                                                                                            GLH1_CAEEL
                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                               P34689; O9TXH4;
P34689; O9TXH4;
01-FEB-1994 (Rel. 28, Created)
01-CCT-2000 (Rel. 40, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation update)
ATP-DEPENDENT RNA HELICASE GLH-1 (GERMLINE HELICASE-1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Developmental biochemistry of cottonseed embryogenesis and germination. XIX. Sequences and genomic organization of the globulin (vicilin) genes of cottonseed.";

Plant Mol. Biol. 9:533-546(1987).

-!- FUNCTION: SEED STORAGE promote.
                                                                                                                                                                                                          GLH1
SEQUENCE FROM N.A. STRAIN-BRISTOL N2;
                                                 Rhabditidae;
                                                                   Caenorhabditis elegans
Eukaryota; Metazoa; Ne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAR-1989 (Rel. 10, Created)
01-MAR-1989 (Rel. 10, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
VICILIN GC72-A PRECURSOR (ALPHA-GLOBULIN A).
Gossypium hirsutum (Upland cotton).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Sp.
Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIR; S06398; S06398.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; M19378; AAA33069.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entities requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PFAM; PF00546; Seedstore_7s;
Seed storage protein; Signal.
                                                                                                                                                                                                                                                                                               138
                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                79
                                                                                                                                                                                                                                                                                                                                                                                                3 DPQQREYEDCRRHCEQQEPRL-----QY-----QCQRRCQEQQRQHG 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONVICILIN, CONGLYCININ, ETC.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: TO OTHER 7S SEED STORAGE PROTEINS (PHASEOLIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBCELLULAR LOCATION: COTYLEDONARY MEMBRANE-BOUND VACUOLAR PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                          CAEEL
                                                                                                                                                                                                                                                                                             RKQQCVKECREQYQEDPWKGERENKWREEEEEESDEGEQQQRNNP 182
                                                                                                                                                                                                                                                                                                                               R--------GGDLMNPQRGGSGRYE------EGEEKQSDNP 66
                                                                                                                                                                                                                                                                                                                                                              DPQRR-YQDCRQHCQQEERRLRPHCEQSCREQYEKQQQQQPDKQFKECQQRCQWQEQRPE 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P50477;
                                                                                                                                                                                                                                                                                                                                                                                                                                   33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR001113; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Malvaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24
605 i
                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                   Peloderinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               605 V
71049 MW;
                                                 Nematoda; Chromadorea; cinae; Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23
                                                                                                                                                                                                                                                                                                                                                                                                                                                 32.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gossypium.
                                                                                                                                                                                                                                                                                                                                                                                                                                 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 120; DB 1;
Pred. No. 3.5e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VICILIN GC72-A.
; C9DB9371C976953B CRC64;
                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                          763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ormatics and the EMBL outst
There are no restrictions
ong as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA
                                                                                                                                                                                                         AA
                                                                   Rhabditida; Rhabditoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 605;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Spermatophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              eurosids II;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and for
                                                                                                                                                                                                                                                                                                                                                                                                                                42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a l.pha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VICILIN,
                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ņo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      on
                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

```
DETTO
                                                                                                                           20
                                                                                                                                                 ₽
                                                                                                                                                                                                                                                 RESULT
                                                            INVO_CEBAL
                                                                                                                                                                                             Matches
                                                                                                                                                                                                       Query Match
Best Local
      INVO_CEBAL
P24709;
01-MAR-1992
01-MAR-1992
01-FEB-1996
                                                                                                                                                                                                                                                                              DOMAIN
ZN_FING
ZN_FING
ZN_FING
ZN_FING
                                                                                                                                                                                                                                                          NP_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ROUSSELL D.L., MCCTONE J.S., Smith P.A., Gruidl M.E., Be Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
-i- FUNCTION: PROBABLE ATP-BINDING RNA HELICASE.
-i- DEVELOPMENTAL STAGE: DURING GERM-LINE PROLIFERATION.
-i- SIMILARITY: TO OTHER "DEAD" BOX FAMILY HELICASES.
                                                                                                                                                                                                                                                                                                                                            REPEAT
REPEAT
REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00039; DEAD_ATP_HELICASE; 1.

PROSITE; PS00039; DEAD_ATP_HELICASE; 1.

Helicase; ATP-binding; RNA-binding; Zinc-finger; Repeat.

7 x 10 AA TANDEM REPEATS, GLY-RICH.

REPEAT 24 33 1.

REPEAT 24 43 2.

REPEAT 34 43 2.

REPEAT 34 43 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PFAM; PF00271; helicase_C; 1. PFAM; PF00098; zf-CCHC; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INTERPRO; IPRO01650; -.
INTERPRO; IPRO01878; -.
PFAM; PF00270; DEAD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. The use by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Roussell D.L., Bennett K.L.;
"glh-1, a germ-line putative RNA helicase from Caenorhabditis, four zinc fingers.";
                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; L19948; AAC27384.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proc. Natl. Acad. Sci. U.S.A. 90:9300-9304(1993).
                                                                                                                                                                                                                                                                                                                                   REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00939; C2HCZNFINGER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIR; A48686; A48686.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REVISIONS TO 83-138; 275;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=94022363; PubMed=8415696;
NVOLUCRIN
                                                                                                       223
                                                                                                                                                 164
                                                                                                                            45
                                                                                                                                                                      N
                                                                                                                           MNPORGGSGRYEEGEEK 61
                                                                                                                                                 QQPGHRS-SDCPEPRKEREPRVCYNCQQPGHTSRECTEERKPREGRTGGFGGGAGFGNNG
                                                                                                       GNDGFGGDGGFGGGEER 239
                                                                                                                                                                     RDPQQREYEDCRRHCEQQEPRLQYQCQ-----RRCQEQQRQH------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P05888;
                                                                                                                                                                                           l Similarity
22; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IPR000629; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IPR000629;
        (Rel.
(Rel.
(Rel.
                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                      AA;
                                                   STANDARD;
        21,
21,
33,
                                                                                                                                                                                                                                        502
. 79792 .
                                                                                                                                                                                                                                                                     63
73
83
93
236
236
173
173
198
257
277
                                                                                                                                                                                                       20.8%;
28.6%;
          Last annotation
                  Last sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           288 AND 398
                                                                                                                                                                                                                                                ¥.
                                                                                                                                                                                                                                                         GLY-RICH.
C2HC-TYPE.
C2HC-TYPE.
C2HC-TYPE.
C2HC-TYPE.
C2HC-TYPE.
C2HC-TYPE.
ATP (BY SIMILARITY).
DEAD BOX.
                                                                                                                                                                                                     Pred.
                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                               ADB69DE286A028D6 CRC64;
                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                       No.
                  update)
                                                  428
        update)
                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   There are no rest
                                                                                                                                                                                                              DB 1; Length 763;
                                                  ΑA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Usage
                                                                                                                                                                                           26;
                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            restrictions on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bennett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL outstation
                                                                                                                                                                                          18;
                                                                                                                                                                     -GRGGDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     has
                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in no way
                                                                                                                                                                     44
                                                                                                                                                 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
```

w ۲۰

```
RESULT 5
INVO_SAGOE
ID INVO_S
AC P24712
AC EUKARY
OC EUKARY
OC EUKARY
OC MAMMAI
RN [1]
RN [1]
RP SEQUEN
RX MEDLIN
RA Philli
RT TEAMARI
RT TEAMARI
RL MO1. F
CC MF
CC MF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
MEDLINE-92114750; PubMed-1766360;
Phillips M., Rice R.H., Djian P., Green H.;
"The involucrin genes of the white-fronted capuchin and cottontop tamarin: the platyrrhine middle region.";
MOL. Biol. Evol. 8:579-591(1991).

-i- FUNCTION: INVOLUCRIN IS A KERATINOCYTE PROTEIN THAT FIRST APPEARS IN THE CELL CYTOSOL, BUT ULTIMATELY BECOMES CROSS-LINKED TO MEMBRANE PROTEINS BY TRANSCLUTAMINASE. ALL THAT RESULTS IN THE FORMATION OF AN INSOLUBLE ENVELOPE BENEATH THE DIAGRAM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDINE-92314750; pubMed-1766330;

MEDINE-92314750; pubMed-1766330;

Phillips M., Rice R.H., Djian R., Green H.;

Phillips M., Rice R.H., Djian R., Green H.;

The involucrin genes of the white-fronted capuchin and cottontop tamarin: the platyrrhine middle region.";

MOI. Biol. Evol. 8:579-591(1991).

-i. FUNCTION: INVOLUCRIN IS A KERATINOCYTE PROTEIN THAT FIRST APPEA IN THE CELL CYTOSOL, BUT ULTIMATELY BECOMES CROSS-LINKED TO MEMBRANE PROTEINS BY TRANSCLUTAMINASE. ALL THAT RESULTS IN THE FORMATION OF AN INSOLUBLE ENVELOPE BENEATH THE PLASMA MEMBRANE.

-i. TISSUE SPECIFICITY: PRESENT IN KERATINOCYTES OF EPIDERMIS AND
                                                                                                                                                                                                                                                                                           01-MAR-1992
01-FEB-1996
                                                                                                                                                                                                                                                                                                                          P24712;
01-MAR-1992
                                                                                                                                                                          SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cebus albifrons (White-fronted capuchin).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Platyrrhini, Cebidae;
                                                                                                                                                                                                           Mammalia;
                                                                                                                                                                                                                          Eukaryota;
                                                                                                                                                                                                                                          Saguinus oedipus (Cotton-top tamarin).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PFAM; PF00904; Involucrin; 28 PROSITE; PS00795; INVOLUCRIN;
                                                                                                                                                                                                                                                                           INVOLUCRIN.
                                                                                                                                                                                                                                                                                                                                                             INVO_SAGOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Keratinocyte; Repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INTERPRO; IPRO00354; INTERPRO; IPRO02360;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; M67478; AAA35405.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=OESOPHAGEAL FIBROBLAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             257
                                                                                                                                                                                                                                                                                                                                                                                                                                              314 HLEQEEKQLEHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER STRATIFIED SQUAMOUS EPITHELIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YEEGEEKQSDNP 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QQEEQLKHLEQQEGQLEHLEQQEGELKHLEQCEGQLEHLEQQEGQ----LELPEQQVGQSK 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EYEDCRRHCEQQEPRLQY------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an email to license@isb-sib.ch).
                                                                                                                                                                                                           Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPR002360; -
                                                                                                                                                                                                                       Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                428
                                                                                                                                                                                                                                                                                           (Rel.
(Rel.
(Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                         21, Created)
21, Last sequences 33, Last annotations.
                                                                                                                                                                                                                         Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50126 MW; 03AB71A5FC34E802 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
29
                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ).5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
Pred.
                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Platyrrhini; Callitrichidae; Saguin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -QCQRRCQEQQRQHGRGGDLMNP-QRGGSGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>N</u>O.
                                                                                                                                                                                                                                                                                                                                                           493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
0.52;
                                                                                                                                                                                                                                                                                                                                                           AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
Cebinae; Cebus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL
                                                                                                                                                                                                       Saguinus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J.S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ψ
```

```
ADD DESCRIPTION OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
BLSA_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLSA_HUMAN
Q02832;
01-JUN-1994
                                                                                                                                                                                          the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
01-OCT-1994 (Rel. 30, Last annotation update)
B-LYMPHOCYTE ANTIGEN PRECURSOR (B-LYMPHOCYTE SURFACE ANTIGEN) (721P).
Homo sapiens (Human).
                                                 Glycoprotein;
                                                                        PIR; A46419;
                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                       Voland J.R., Wyzykowski R.J., Huang M., Dutton R.W.;
"Cloning and sequencing of a trophoblast-endothelial-activated lymphocyte surface protein: cDNA sequence and genomic structure. Proc. Natl. Acad. Sci. U.S.A. 89:10425-10429(1992).
-!- FUNCTION: THIS PROTEIN MAY BE INVOLVED IN B-CELL ACTIVATION. MAY ALSO BE INVOLVED IN SIGNAL TRANSDUCTION AND GENE REGULAT-
-!- SUBCELLULAR LOCATION: MEMBRANE-ASSOCIATED (PROBABLE).
-!- TISSUE SPECIFICITY: EXPRESSED IN ACTIVATED LYMPHOCYTES, MOST
                                                                                               EMBL; M99578; AAA36187.1; -.
                                                                                                                                                                       entities requires
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-93066251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=PLACENTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; M67477; AAA36950.1; HSSP; P80220; 1DIP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00795; INVOLUCRIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PFAM; PF00904; Involucrin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Keratinocyte; Repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             374 LEQEEKQLEHP 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                                                                                                                                                                                                                                                                                                                               TISSUE SPECIFICITY: EXPRESSED IN ACTIVATED LYMPHOCYTES, VASCULAR ENDOTHELIUM, AND SYNCYTIOTROPHOBLAST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE SPECIFICITY: PRESENT IN KERATINOCYTES OTHER STRATIFIED SQUAMOUS EPITHELIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through een the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EEGEEKQSDNP 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EYEDCRRHCEQQEPRLQYQCQRRCQ----EQQ----RQHGRGGDLMNP-QRGGSGRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EQEEQLKHLEQQEEQLKHLEQQEGQLEHLEQQEGQLKHLEQH--EGQLELPEQQVGQSKH
                                                                                                                                                   an
                                                                                                                                                                                                                                                                     the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR002360;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR000354;
                                                                                                                                           equires a license agreement (S email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         493 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                        A46419
Signal; Membrane
1 21 PC
22 550 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=1438229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57920 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
                            POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A626FC4E7799AEC9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      550
                                                                                                                                                                       (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                              There are no restrictions in as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               There are no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 1;
0.75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΑA
                                                                                                                                                                       http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       as its content
                                                                                                                                                                                            Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                       and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AND GENE REGULATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OF EPIDERMIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                by
                                                                                                                                                                                                 γģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               restrictions
                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and for
                                                                                                                                                                                                                                                                     EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14;
                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     way
```

B-LYMPHOCYTE ANTIGEN

```
RESULT 7
GLB1_MAIZE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-APR-1990
01-AUG-1990
15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
CARBOHYD
CARBOHYD
                                                                                                                              entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                             This
   SEQUENCE
             CARBOHYD
                           CHAIN
                                      PROPEP
                                                 SIGNAL
                                                          Seed storage
                                                                      PFAM; PF00546; Seedstore_7s;
                                                                                              MAIZEDB;
                                                                                                                 EMBL; M24845; AAA33467.1; -.
                                                                                                                                                              the European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                              genes.
                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 87-100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zea mays (Maize)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GLB1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GLOBULIN-1 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLB1_MAIZE P15590;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                   INTERPRO;
                                                                                                                                                                                                                                                                                                                                                     Kriz A.L.;
                                                                                                                                                                                                                                                                                                                                                              MEDLINE-89374022;
                                                                                                                                                                                                                                                                                                                                                                                                                               Belanger F.C., Kriz A.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-CV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Magnoliophyta;
                                                                                                                                                                                                                                                                                  ÷
                                                                                                                                                                                                                                                                                                                                      'Characterization of embryo globulins encoded by the maize
                                                                                                                                                                                                                                                                                                                                                                                                          'Molecular characterization of the 
by the Glb1 gene.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                lant Physiol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 PQQREYEDCRRH-----
                                                                                                                                                                                                                                  PROTEINS, RESPECTIVELY.
SIMILARITY: TO OTHER 7S SEED STORAGE PROTEINS
CONVICILIN, CONGLYCININ, ETC.).
                                                                                                                                                                                                                                                                                                       PTM:
                                                                                                                                                                                                                                                                              MATURE PROTEIN FROM THE PRIMARY TRANSLATION PRODUCT. POLYMORPHISM: THE THREE MOST COMMONLY OCCURRING GLB1
                                                                                                                                                                                                                                                                     THE DESIGNATION L,
                                                                                                                                                                                               SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PADRVVRLCERHHAAPPRGPAPGRCPQGEPG-PPRGRRRSQKRERERGRGG----PMQGG 524
                                                                                                        P50477; 1CAW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                              30181;
                                                                                                                                                                                                                                                                                                      Genet. 27:239-251(1989). THREE PROTEIN-PROCESSING
                                                                                 IPR001113; -
                                                                                                                                                                                                                                                                                                                                                                                                                                            INBRED LINE VA26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Viridiplantae; Embryophyta; Tracheophyta; yta; Liliopsida; Poales; Poaceae; Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          138
550 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (Rel. 14, Created)
(Rel. 15, Last sequence update)
(Rel. 38, Last annotation update)
S ALLELE PRECURSOR (GLB1-S) (7S-LIKE).
              349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                344
85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                          19
87
                                                          protein; Signal
   AΑ;
                                                                                                                                                                                                                                                                                                                                                                                               91:636-643(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                              PubMed=2775172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    365
85
    65029
                                     86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20.1%;
                                                                                                                                                                                                                                                                     I, AND S FOR LARGE,
    X
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WW.;
GLOBULIN-1 S ALLELE.
N-LINKED (GLCNAC. . .) (P
525ED1D00A062976 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LEUCINE-ZIPPER.
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
; 02989938A5FB80F7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -CEQQEPRLQYQCQRRCQEQQRQHGRGGDLMNPQRGG 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 75.5;
Pred. No. 0.
                                                 OR 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                      STEPS OCCUR IN THE FORMATION OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                    major maize embryo globulin encoded
                                              (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  573
                                                                                                                                                                                      There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .93;
                                                                                                                                                                                                                                                                     INTERMEDIATE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 550;
                                                                                                                                                                                                                                              (PHASEOLIN,
              (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Spermatophyta;
                                                                                                                                                                and for
                                                                                                                                                                                                                                                                      AND
                                                                                                                                                                                                                                                                               ALLELES
                                                                                                                                                                                                                                                                                                                                        Glb
                                                                                                                                                                                                                                                                      SMALL
                                                                                                                                                                                                                                               VICILIN
                                                                                                                                                                           'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                n no way
                                                                                                                                                                                       0n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ψ
```

.

ų.

```
ANDR_PANTR
ANDR_DANTR
ANDR_D
ANDR_D
ANDRO
O97775
DT 30-MAY
DT 30-M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match.
Best Local S
Matches 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ANDR_PANTR STAN

097775;

30-MAY-2000 (Rel. 30-MAY-2000) (Rel. 30-MAY-2000 (Rel. 30-MAY-2000 (Rel. 30-MAY-2000 (Rel. 30-
                                                                                                                                                                                      DNA_BIND
ZN_FING
ZN_FING
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J. Mol. Evol. 47:334-342(1998).

11. FUNCTION: THE STEROID HORMONES AND THEIR RECEPTORS ARE INVOLVED IN THE REQULATION OF EURARYCOTIC GENE EXPRESSION AND AFFECT CELLULAR PROLIFERATION AND DIFFERENTIATION IN TARGET TISSUES.

11. SUBCELLULAR LOCATION: NUCLEAR.

12. DOMAIN: COMPOSED OF THREE DOMAINS: A MODULATING N-TERMINAL DOMAIN.

A DNA-BINDING DOMAIN AND A C-TERMINAL STEROID-BINDING DOMAIN.

13. STRILARTTY: BELONGS TO THE NUCLEAR HORMONE RECEPTORS FAMILY.
   DOMAIN
DOMAIN
                                                            DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                   Receptor; Transcription regulation; DNA-binding; Nuclear Zinc-finger; Steroid-binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PFAM; PF00104; hormone_rec; 1.
PFAM; PF00105; zf-C4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U94177; AAC73048.1; HSSP; P06536; 1RGD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 disease.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Choong C.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=98404153; PubMed=9732460;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR00047; STROIDFINGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INTERPRO; IPR001103; -. INTERPRO; IPR001628; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pan troglodytes (Chimpanzee).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR OR NR3C4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ANDROGEN RECEPTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             [NTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Evolution of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NR3 SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EEKQSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CVRRCEDRPWHQRPRCLEQCREEEREKRQERSRIIEADD-----RSGEGSSEDEREREQEK 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRRHCE----QQEPRLQYQC--QRRCQEQQRQHGRGGGLMNPQRGGSG------RYEEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EEKQKD 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 Similarity
23; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                          PR00521; ANDROGENR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IPR000536; -.
      551
587
587
682
57
84
192
371
395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kemppainen J. f the primate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39, Created)
39, Last sequence update)
39, Last annotation update)
(DIHYDROTESTOSTERONE RECEPTOR)
      549
616
571
611
911
918
78
88
196
380
401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           androgen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 72; DB 1
Pred. No. 2.2;
4; Mismatches
                                                                                                                                                                                                                                                C4-TYPE
C4-TYPE.
                            POLY-PRO.
POLY-ALA.
                                                                                         POLY-GLN.
                                                                                                                                                         POLY-GLN
                                                                                                                                                                                                                      C4-TYPE
                                                                                                                                                                                                                                                                                                                MODULATING
                                                                                                                                                                                   LIGAND-BINDING
   POLY-GLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        receptor:
                                                                                                                                                                                                                                                                             ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  911
                                                                                                                                                                                                                                                                                                                (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ą
                                                                                                                                                                                                                                                                                FINGERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           structural basis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL
                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a collaboration - MBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          is in no way for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
```

SS.

SEQUENCE

911

ĀĀ,

98402

WW;

601B9BD4E697DAA4 CRC64;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRHY_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
               <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         epidermis."
J. Invest.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O'Keefe E.J., Hamilton E.H., Lee S.-C., Steinert P.M.; "Trichohyalin: a structural protein of hair, tongue, nail,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

MEDLINE=93280194; PubMed=7685034;

Lee S.-C., Kim I.-G., Marekov L.N., O'Keefe E.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q07283;
01-OCT-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1731-1898 FROM N.A., AND CHARACTERIZATION MEDLINE=93315897; PubMed=7686953;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              envelope precursor, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "The structure of human trichohyalin. functional EF-hand-like calcium-bindir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human)
Eukaryota; Metazoa; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-1994
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Steinert P.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRICHOHYALIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T'RHY_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .inking)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115 QP 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Invest. Dermatol. 101:65S-71S(1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G
                                                                                                                                                                                                                                                                                                                                FUNCTION: INTERMEDIATE FILAMENT-ASSOCIATED PROTEIN THAT ASSOCIATES IN REGULAR ARRAYS WITH KERATIN INTERMEDIATE FILAMENTS (KIF) OF THE INNER ROOT SHEATH CELLS OF THE HAIR FOLLICLE AND THE GRANULAR LAYER OF THE EPIDERMIS. IT LATER BECOMES CROSS-LINKED TO KIF BY ISODIPEPTIDE BONDS. IT MAY SERVE AS SCAFFOLD PROTEIN, TOGETHER WITH INVOLUCRIN, IN THE ORGANIZATION OF THE CELL ENVELOPE OR EVEN ANCHOR THE CELL ENVELOPE TO THE KIF NETWORK. IT MAY BE INVOLUCED IN 1TS OWN CALCIUM-DEPENDENT POSTSYNTHETIC PROCESSING DURING TERMINAL
                                                                                                                                                                                                                                                 SUBUNIT: MONOMER (PROBABLE).
TISSUE SPECIFICITY: FOUND IN THE HARD KERATINIZING TISSUES S
THE INNER ROOT SHEAT (IRS) OF HAIR FOLLICLES AND MEDUILA, AN
THE FILIFORM PAPILLAE OF DORSAL TONGUE EPITHELIUM (PROBABLE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OR.
            PROBABLY CONVERTED TO CITRULLINES BY PEPTIDYLARGININE SIMILARITY: IN THE N-TERMINAL SECTION; BELONGS TO THE
                                                                            THE MOST REGULAR AND MAY BIND KIF DIRECTLY BY IONIC INTERACTIONS DOMAINS 5 AND 7 ARE LESS WELL ORGANIZED AND MAY INDUCE FOLDS IN THE MOLECULE. DOMAIN 9 CONTAINS THE C-TERMINUS, CONSERVED AMONG
                                                                                                                            CALCIUM-BINDING DOMAINS. DOMAINS 2-4, 6, AND 8 ARE ALMOST ENTIRELY ALPHA-HELICAL, CONFIGURED AS A SERIES OF PEPTIDE REPEATS OF VARYING REGULARITY, AND ARE THOUGHT TO FORM A SINGLE-STRANDED ALPHA-HELICAL ROD STABLLIZED BY IONIC INTERACTIONS. DOMAIN 6 IS
                                                                                                                                                                                                 THE EPIDERMIS.

DOMAIN: CONSISTS OF NINE DOMAINS. DOMAIN 1 CONTAINS TWO EF-HAND
                                                                                                                                                                                                                                    DEVELOPMENTAL STAGE: EXPRESSED DURING LATE DIFFERENTIATION
                                                                 DIFFERENT SPECIES.
                                                                                                                                                                                                                                                                                                                        DIFFERENTIATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΝP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QQQQQQ--QQQQQQQQQQQQQQETSPRQQQQQGEDGSPQAHRRGPTGYLVLDEEQQPS 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QQREYEDCRRHCEQQEPRLQYQCQRRCQEQQRQHGRGGDLMNPQRGGSGRYEEGEEKQSD 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TRHY OR THL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                              KNOWN SUBSTRATE OF TRANSGLUTAMINASE. SOME 200 ARGININES ARE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein.";
Chem. 268:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Rel. 30, Created)
(Rel. 30, Last sequence update)
(Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            268:12164-12176(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19
30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              calcium-binding an intermediate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  72;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Potential multiple roles as a ng protein, a cornified cell te filament-associated (cross-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        À
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Parry D.A.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                    TISSUES SUCH
            DEIMIDASE
S-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                  AND IN
                                                                                                                                                                                                                                    QF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.
```

```
밁
               Qy
                                 В
                                                 δÃ
                                                                                                             Matches
                                                                           Query Match
Best Local
                                 1112
                                                                                                            CONFLICT
SEQUENCE
                                                                                                                            CONFLICT
                                                                                                                                             DOMAIN
CONFLICT
                                                                                                                                                                                                                                        REPEAT
REPEAT
REPEAT
REPEAT
REPEAT
REPEAT
DOMAIN
                                                                                                                                                                                                                                                                                                   REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                             REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                       CA_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                       Repeat;
1170 QRYRD-EDQRSD 1180
                                                                                                                                                                                      REPEAT
REPEAT
                                                                                                                                                                                                       REPEAT
REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                            REPEAT
DOMAIN
                                                                                                                                                                                                                                                                                                                                            REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                       PFAM; PF00036; efhand; 1. PROSITE; PS00018; EF_HAND; 1. PROSITE; PS00303; S100_CABP;
                                                                                                                                                              REPEAT
                                                                                                                                                                      REPEAT
                                                                                                                                                                               REPEAT
                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MIM; 190370;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for con
                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                               INTERPRO; IPR002048; -. PFAM; PF01023; S_100; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INTERPRO; IPR001751; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; L09190; AAA65582.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This
                53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: CONTAINS 2 EF-HAND CALCIUM-BINDING DOMAINS
                                 REEPEKRRRQERERQCREEEELQQEEEQLLREEREKRRQELERQYREEEELQRQKR--K 1169
                                                 KRDPQQREYEDCRRHCEQQEPRLQYQCQ-----RRCQEQQRQHGRGGDLMNPQRGGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A45973;
                GRYEEGEEKQSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P02633; 1BOC.
                                                                  Similarity 27.1
20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                               Calcium-binding.
                                                                                                            409
                                                                                                                                                                                                                                                                                                   352
365
378
391
391
397
403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A45973.
                                                                                                                                                                                                                                                                                                                                                                                                       22
62
                                                                                                            AA;
                .64
                                                                                                                                                                                      444
702
1162
952
982
1012
1042
1072
                                                                                                                    1880
                                                                                                                            1849
1752
1801
1857
                                                                                                                                                                                                                                                                 408
414
420
426
432
                                                                                                                                                                                                                                                        438
                                                                           19.1%;
27.8%;
                                                                                                            247219
                                                                  17;
                                                                                                            MW;
                                                                          Score 71.5;
Pred. No. 7
                                                                                                          23 X 26 AA APPROXIMATE TANDEM REPEATS
F -> L. (IN REF. 2).
QENDROYR -> RSETGSTG (IN REF. 2).
Q -> K (IN REF. 2).
V -> G (IN REF. 2).
W -> G (IN REF. 2).
                                                                                                                                                              4-8.
                                                                                                                                                                                      4-1.
4-2.
4-3.
4-4.
                                                                                                                                                                                                                                                         2-8.
                                                                                                                                                                                                                                                                 1-6.
9 x
2-1.
2-3.
2-4.
2-6.
                                                                                                                                                                                                                                                 2-9
                                                                                                                                                                                                                                                                                                                                                                                     SITE I (LOW AFFINITY) (POTENTIAL).
SITE I (HIGH AFFINITY) (POTENTIAL).
6 X 13 AA TANDEM REPEATS OF
R-R-E-Q-E-E-E-R-R-E-Q-Q-L.
                                                                                                                                                                                                                                                                                                                                                                                                                       S-100 LIKE
                                                                                                                                                                                                                               X 28 AA APPROXIMATE TANDEM REPEATS. X 30 AA TANDEM REPEATS.
                                                                  ed. No. 7.2
Mismatches
                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                             (APPROXIMATE)
                                                                                                                                                                                                                                                                                                                                                                     (APPROXIMATE).
                                                                                                                                                                                                                                                                                                                            ΑA
                                                                                                                                                                                                                                                                                                                           TANDEM REPEATS OF R-R-E-Q-Q-L
                                                                         .
ب
                                                                                   DB
                                                                  24;
                                                                                   Length 1898;
                                                                  Indels
                                                                  11;
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in no way
                                                 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                 w
```

```
RESULT 11
ANDR_HADDR_H AC P10275
DT 01-APR
DT 01-APR
DT 01-APR
DT ADDROGG GN AR OR OS Homo s
OC Eukary
OC Mammal RN [1]
RN [1]
RP SEQUEN
RA Lubahn
RA French
                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                              ф
                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
INVO_AC
                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INVO_AOTTR
P24708;
01-MAR-1992
01-MAR-1992
01-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00795; INVOLUCRIN; Keratinocyte; Repeat.
SEQUENCE 544 AA; 6307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LT 10
_AOTTR
  Lubahn D. French F.
                                                                                                               ANDR_HUMAN STANDARD; PRT; 919 AA. P10275; 01-MAR-1989 (Rel. 10, Created) 01-APR-1990 (Rel. 14, Last sequence update) 01-OCT-2000 (Rel. 40, Last annotation update) ANDROGEN RECEPTOR (DIHYDROTESTOSTERONE RECEPTOR).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                         SEQUENCE FROM N.A. MEDLINE=89112208; PubMed=3216866;
                                                                Mammalia;
                                                                            Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M25313; AAA35375.1; HSSP; P80220; 1DIP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=90014142;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aotus trivirgatus (Night monkey) (Douroucouli).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Platyrrhini; Cebidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tseng H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INVOLUCRIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            INTERPRO; IPRO00354; -.
                                                                                                                                                                                                                                            414
                                                                                                                                                                                                                                                                                              354
                                                                                                                                                                                                                                                                     45
                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                   OR NR3C4 OR DHTR.
                                                                                                                                                                                                                                                                                                                        ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     e involucrin gene of the owl monkey: origin of the early region.

Biol. Evol. 6:460-468(1989).

FUNCTION: INVOLUCRIN IS A KERATINOCYTE PROTEIN THAT FIRST APPEA
IN THE CELL CYTOSOL, BUT ULTIMATELY BECOMES CROSS-LINKED TO
MEMBRANE PROTEINS BY TRANSGLOTAMINASE. ALL THAT RESULTS IN THE
FORMATION OF AN INSOLUBLE ENVELOPE BENEATH THE PLASMA MEMBRANE.
TISSUE SPECIFICITY: PRESENT IN KERATINOCYTES OF EPIDERMIS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER STRATIFIED SQUAMOUS EPITHELIA.
                                                                            sapiens (Human)
ryota; Metazoa; (
                                                                                                                                                                                                                                            LPEQQVGQSKHLEQEEKQLEHP
                                                                                                                                                                                                                                                                     MNPQRGGSGRYEEGEEKQSDNP
                                                                                                                                                                                                                                                                                                                     QQREYEDCRRHCEQQEPRLQY-------OCQRRCQEQQRQHGRGGDL------
                                                                                                                                                                                                                                                                                              QLEEQEGQVKHLEQQEEQLKHLEQQEGQPKHLEQLEKQLEHLEQQEGQLKHLEQREEQLE 413
                                                                                                                                                                                                                                                                                                                                                             Similarity
  .в.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Green H
                                                                Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Rel.
                                                                                                                                                                                                                                                                                                                                                 Conservative
   Joseph
Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=2507864;
                                                               Chordata;
Primates;
  E.M.,
                                                                                                                                                                                                                                                                                                                                                           18.9%;
25.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
              Sar
                                                                                                                                                                                                                                                                                                                                               17; Mismatches
                                                                                                                                                                                                                                              435
                                                                                                                                                                                                                                                                                                                                                           Score 71; I
Pred. No. 2.
              Σ
;
                                                               Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                              2A02ABA5E1499F9D CRC64;
              Tan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                544
              ٽ.
,
                                                                                                                                                                                                                                                                                                                                                      DB 2.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA
             Higgs
                                                                                                                                                                                                                                                                                                                                                                       1; Length 544;
                                                                                                                                                                                                                                                                                                                                               24;
              H. N.,
                                                                                                                                                                                                                                                                                                                                               Indels
                                                                           Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aotinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
                                                                Homo
              Larson
                                                                                                                                                                                                                                                                                                                                               20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   region.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aotus.
                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                      44
                                                                                                                                                                                                                                                                                                                                               2
  "Sequence of the intron/exon junctions of the coding human androgen receptor gene and identification of a in a family with complete androgen insensitivity."; Proc. Natl. Acad. Sci. U.S.A. 86:9534-9538(1989).
                                                                                                                                                        Mulder E., Brinkmann A.O "Cloning, structure and androgen receptor.";
                                                                                                                                                                                       SEQUENCE OF 468-919 FROM N.A.
MEDLINE=88240407; PubMed=3377788;
Trapman J. Klaassen P. Kuiper G.G.J.M.,
Faber P.W., van Rooij H.C.J., Geurts van F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-89098909; PubMed-2911578; Tilley W.D., Marcelli M., Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=PROSTATE;
MEDLINE=89017168;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=90083302; PubMed=2594783; Lubahn D.B., Brown T.R., Simental
             TISSUE=BLOOD;
                                                                          POLYMORPHISM OF POLY-GLN REGION.
MEDLINE=9220629; PubMed=1561105;
MEDLINE=9220629; PubMed=1561105;
Sleddens H.F., Oostra B.A., Brinkmann
"Trinucleotide repeat polymorphism in
                                                                                                                                      Biochem..
                                                                                                                                                                                                                                                                                             Chang
                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-91155943; PubMed=2293020; Marcelli M., Tilley W.D., Wilson C.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Specific region in hormone binding do binding and trans-activation by human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Govindan M.V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=90258935;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wilson E.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cloning,
                          POLYMORPHISM
                                                   Nucleic
                                                                                                                                                                                                                                               Thang C., Kokontis J., Liao S.; "Molecular cloning of human and rat complementary DNA encoding androgen receptors."; Science 240:324-326(1988).
                                                                                                                                                                                                                                                                                                        MEDLINE-88178111;
                                                                                                                                                                                                                                                                                                                                                                                                              McPhaul M.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Characterization and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Froc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human and rat androgen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mol. Endocrinol. 4:417-427(1990).
                                       10]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SSUE=PROSTATE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Natl.
                                                   Acids
                                                                                                                                                                                                                                                                                                        OF 189-919 FROM N.A.
38178111; PubMed=3353726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FROM
                                                                                                                                        Biophys. Res.
                                                                                                                                                     receptor.
                                                                                                                                                                                                                                                                                                                                                          androgen resistance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Acad.
                          OF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  French F.S.;
                                                  Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N.A.
                          POLY-GLY
                                                                                                                                                                                                                                                                                                                                              4:1105-1116(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=3174628;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=2342476;
                                                  20:1427-1427(1992).
                                                                                                                                                                              A.O.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             expression of a
                                                                                                                                        Commun. 153:241-248(1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   receptors.
                                                                                                                                                                 expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J.A.,
                                                                                                                                                                 of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  domain
                                                                                                                                                                 ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      androgen receptor.
```

```
human androgen receptor: complementary deoxyribonucleic acid
ing, sequence analysis and gene expression in prostate.";
Endocrinol. 2:1265-1275(1988).
```

Higgs the coding cation of a H.N., Migeon point mutation region of the

is essential for hormone

Chang C., Kokontis J., Liao S.; "Structural analysis of complementary DNA and amino Sci. U.S.A. 85:7211-7215(1988). acid sequences

86:327-331(1989) cDNA encoding McPhaul M.J.; the human androgen

identification of mutations that cause androgen resistance: prematur termination of the receptor protein at amino acid residue 588 causes Definition of the human androgen receptor gene structure permits Griffin J.E., Wilson

Kessel A., van der Korput J.A.G.M., Voorhorst M.M.,

cDNA encoding

the

A.O., Trapman J.; the androgen receptor gene

,

tо

the

EMBL/GenBank/DDBJ databases

```
Nucleic [14]
              binding
                                                              MEDLINE=92235226; PubMed=1569163;
Nakao R., Haji M., Yanase T., Ogc
                                                                                                                                                                                        Batch J.A., Williams D.M., I
Hughes I.A., Patterson M.N.;
                                                                                                                                                                                                                                                                                                altered hormone-binding characteristics.";
                                                                                                                                                                                                                                                                                                                                                              VARIANT CAIS ASN-695 AND HIS-695, AND SEQUE MEDLINE-92131007; PubMed=1775137; Ris-Stalpers C., Trifiro M.A., Kulper G.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Androgen resistance associated with a mutation of the receptor at amino acid 772 (Arg-->Cys) results from a decreased messenger ribonucleic acid levels and impair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted [11]
                                                 Nakao R., Ha
Fukumaki Y.,
                                                                                                                                                                                                                                                                                MOL
                                                                                                                                                                                                                                                                                                                 "Substitution of aspartic acid-686 by histidine or asparagine in human androgen receptor leads to a functionally inactive protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Brinkmann A.O., Mulder E.:
"A mutation in the ligand binding domain chuman LNCaP cells affects steroid binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REVIEW ON VARIANTS.
MEDLINE=97169385; PubMed=9016528;
Gottlieb B., Trifiro M., Lumbroso
"A single amino acid substitution (Met-786-->Val) in the steroid-
binding domain of human androgen receptor leads to complete andro
insensitivity syndrome.";
                                                                                                                                                                                                                             MEDLINE=93338440;
                                                                                                                                                                                                                                             VARIANTS CAIS AND PAIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VARIANT CYS-774.
MEDLINE=91310758; PubMed=1856263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=91186983; PubMed=2082179;
Brown T.R., Lubahn D.B., Wilson E.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gottlieb B., Trifiro M., Lumbroso R., "The androgen receptor gene mutations Nucleic Acids Res. 25:158-162(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (12)
REVIEW ON VARIANTS.
REVIEW ON VARIANTS.
GOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=91287825; PubMad-1
                                                                                                    VARIANT CAIS VAL-787
                                                                                                                                                                           "Androgen
                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Marcelli M., Tilley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   receptors from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Functional characterization of naturally occurring mutant androgen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VARIANT CAIS MET-866.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Berrevoets C., Claassen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Veldscholte J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=91083633; PubMed=2260966;
Veldscholte J., Ris-Stalpers C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VARIANT LNCAP ALA-877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "The androgen r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nature 352:77-79(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     muscular atrophy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Androgen receptor gene mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                         Clin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Spada A.R., Wilson E.M., Lubahn
                                                                                                                                                                                                                                                                                Endocrinol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Endocrinol.
                                                                                                                                                                                                                                                                                                                                                     van Rooij H.C., Kaufman M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Acids
                                                                                                                                 with androgen insensitivity syndrome. Genet. 1:497-503(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                        function."
                                                                                                                                                                                                                                                                                                                                                                                                                                         Endocrinol. Metab.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            to anti-androgens.";
                                                                                                                                                                      receptor gene mutations identified
                                                 Nawata H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptor gene mutations Res. 22:3560-3562(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 subjects with complete androgen 1. 4:1759-1772(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hughes L.A., Gottlieb
                                                                                                                                                                                                                                                                                5:1562-1569(1991).
                                                                                                                                                                                                                           PubMed=1307250;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PubMed=2062380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₩.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Commun. 173:534-540(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E., van Rooij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zoppi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGION
                                                                                                                                                                                                          Davies
                                                                                                                                                                                                                                                                                                                                                                                                                                       73:318-325(1991).
                                                               ogo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              s.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kuiper G.G.,
Rooij H.C.J.,
                                                                                                                                                                                                        H.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Griffin J.E.,
                                                                                                                                                                                                                                                                                                                                                Rosenfield R.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .B., Harding A.E., X-linked spinal a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B., Pinsk
                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                               Takayanagi R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vasiliou
                                                                                                                                                                                                        Brown B.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of the androgen receptor of g characteristics and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pinsky
                                                                                                                                                                                                                                                                                                                                                                    Jenster G.,
                                                                                                                                                         е. ";
Уд
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F.S., Migeon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jenster
Trapman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .ª D
                                                                                                                                                                                                                                                                                                                                                                                                      QF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   insensitivity.";
                                                                                                                                                                        SSCP
                                                                                                                                                                                                                                                                                                               inactive protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        impairment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲.,
                                                                                                                                                                                                                                                                                                                                                                                                      629-723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wilson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                        Evans
                                                                 Katsube
                                                                                                                                                                        in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and bulbar
                                                                                                                                                                                                                                                                                                                                                     Liao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pinsky L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          combination
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         androgen
                                                                                                                                                                        fourteen
                                                                                                                                                                                                                                                                                                                                                                  Roma Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                        B.A.J.,
                                                                                                                                                                                                                                                                                                                                                                                                      FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     С.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
.
            androgen
                                                                                                                                                                                                                                                                                                                                                                                                      N.A.
                                                                                                                                                                                                                                                                                                                 the
with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Of.
```

```
TAGB_DICDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         дd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                  01-OCT-1996 (Rel. 01-OCT-1996 (Rel. 15-JUL-1999 (Rel. PRESTALK-SPECIFIC PRESTALK-SPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J. Clin.
[20]
                                     "A multidrug resistance transporter/serine pr
for prestalk specialization in Dictyostelium.
Genes Dev. 9:1111-1122(1995).
                                                                                                                                     Shaulsky G.,
                                                                                                                                                                   MEDLINE=95262903; PubMed=7744252;
                                                                                                                                                                                                         STRAIN-AX4
                                                                                                                                                                                                                                                                                                     Eukaryota;
                                                                                                                                                                                                                                                                                                                                       Dictyostelium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P54683;
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nakao R., Yanase T., Sakai Y., Haj
"A single amino acid substitution
binding domain of the human androg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "A single-base substitution in exon 6 of the androgen receptor causing complete androgen insensitivity: the mutated receptor to transactivate but binds to DNA in vitro.";

Hum. Mol. Genet. 2:1809-1812(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ligand binding domain which affects steroid binding and response to antiandromons.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAGB_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=93315568; PubMed=8325932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=93372806; PubMed=8103398; Lobaccaro J.-M., Lumbroso S., Kta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=92335289;
Newmark J.R., Har
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VARIANT LAWLAR ALL. VARIANT LAWLAR AND VARIANT LAWLAR ALL. VARIANT LAWLAR ALL. VARIANT LAWLAR ALL. VARIANT LAWLAR ALL. VARIANTAL ALL VARIANTAL ALL VARIANTAL ALL VARIANTAL ALL VARIANTAL ALL VARIANTAL VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VARIANT PAIS VAL-743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VARIANT CAIS ARG-807
MEDLINE=94108430; Pu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Adeyemo O., Kallio P.J., Palvimo J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       An
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VARIANT CAIS VAL-754.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jenster G., Trapman J., Brinkmann A.O., Mulder E.
"The androgen receptor in LNCaP cells contains a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Androgen receptor gene mutations in human prosta
Proc. Natl. Acad. Sci. U.S.A. 89:6319-6323(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Newmark J.R., Hardy D.O., Tonb D.C., Isaacs W.B., Brown T.R., Barrack E.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /ARIANT LNCAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Steroid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              accaro J.-M., Lumbroso S., Ktari R., exonic point mutation creates a Mael eptor gene of a family with complete
      FUNCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QQQQQQQQQQQQQQQQQQQQQETSPR--QQQQQQGEDGSPQAHRRGPTGYLVLDEEQQPS 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DICDI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QQREYEDCRRHCEQQEPRLQYQCQRRCQEQQRQHGRGGDLMNPQRGGSGRYEEGEEKQSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NP 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mol. Genet.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity
18; Conser
                                                                                                                                                                                                                                        FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Endocrinol, Metab.
                                                                                                                                                                                                                                                                                                  Dictyosteliida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Biochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                     Kuspa A.,
                                                                                                                                                                                                                                    N.A
      INTERCELLULAR COMMUNICATION
                                                                                                                                                                                                                                                                                                                                 discoideum (Slime mold)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2:1041-1043(1993).
                                                                                                                                                                                                                                                                                                                                                                                34, Created)
34, Last sequence update)
38, Last annotation updat
PROTEIN TAGB PRECURSOR (E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PubMed=8281140;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PubMed=1631125;
dy D.O., Tonb D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18.9%;
                                                                                                                                     Loomis W.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Biol.
                                                                                                                                                                                                                                                                                                  Dictyostelium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y., Haji M., Nawata H.; tution (Gly743 --> Val) in the steroid-androgen receptor leads to Reifenstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 71; DB Pred. No. 4.2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74:1152-1157(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41:665-669(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R., Dumas R., S
MaeIII site in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kontula K., Jaenne O.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  androgen insensitivity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽Ā
                                                                                                                                                                                                                                                                                                                                                                                                     (EC
VIA TAGB
                                                                protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prostate cancer.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B.S.,
                                                                                                                                                                                                                                                                                                                                                                                                  3.4.21.-).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 919;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mutation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sultan C.;
the androgen
   MAY MEDIATE
                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   characteristics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           n receptor gene
receptor fails
                                                                                                   is required
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64
```

1;

÷

CELLULAR DIFFERENTIATION WITH MORPHOGENESIS.
THE N-TERMINAL SECTION; BELONGS TO PEPTIDASE FAMILY

```
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                                        CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                           ACT_SITE
                                                                                                                                                                                                                                                   TRANSMEM
TRANSMEM
TRANSMEM
                                                                                                                                                                                                                                                                                                            Signal.
SIGNAL
CHAIN
                                                                                  DOMAIN
DOMAIN
                                                                                                                                  DOMAIN
DOMAIN
DOMAIN
                                                                                                                                                                                                                                   TRANSMEM ACT_SITE
                                                                                                                                                                                                                                                                            TRANSMEM
TRANSMEM
                                                                                                                                                                                    DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                           DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                           PFAM; PF00664; ABC_membrane; 1. PFAM; PF00005; ABC_tran; 1. PRINTS; PR00723; SUBTILISIN. PROSITE; PS00136; SUBTILASE_ASP PROSITE; PS00137; SUBTILASE_HIS
                                                                          DOMAIN
                                                                                                           DOMAIN
                                                                                                                  DOMAIN
                                                                                                                            DOMAIN
                                                                                                                                                                    DOMAIN
                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                    ACT.
                                                                                                                                                                                                                                                                                                                                                                                                                             DICTYDB; DD02059;
                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U20432;
HSSP; P13569;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             --
                                                                                                                                                                                                                                                                                                                                     Hydrolase;
                                                                                                                                                                                                                                                                                                                                             PROSITE;
                                                                                                                                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                   INTERPRO; IPR001140; -.
INTERPRO; IPR001617; -.
                                                                                                                                                                                                                                                                                                                                                                                                                     INTERPRO; IPR000209;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S8; ALSO KNOWN AS THE SUBTILASE FAMILY.
SIMILARITY: IN THE C-TERMINAL SECTION; BELONGS TO THE ATP-BINDING TRANSPORT PROTEIN FAMILY (ABC TRANSPORTERS). MDR SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INTEGRATION OF
SIMILARITY: IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             European
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY: STRONG, TO TAGE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                             PS00211;
                                                                                                                                                                                                                                                                                                                                                     PS00138;
 1011
1076
1121
1210
1210
1309
1332
1332
432
                                                                                                                                                                                                                                                                                                   378
                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA62212.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                     INBD.
                                                                                                                                                                                                                                                                                                                                          SUBTILASE_ASP; FAI
SUBTILASE_HIS; 1.
SUBTILASE_SER; 1.
ABC_TRANSPORTER;
                                                                                                                                                                                                                                                                                                                                                                                                                             TAGB
         1658
                                                          protease;
 212518
N-LINKED (GLCNAC...
                                                                                                                                                                                                                                                                                                                                   ATP-binding; Transport;
                                                                                                                                                                                                           CHARGE RELAY
CHARGE RELAY
ATP (POTENTIA
                                                                                                  POLY-ASN.
POLY-SER.
                                                                                                                  POLY-GLY.
                                                                                                                                  POLY-ILE.
POLY-GLU.
                                                                                                                                                  POLY-GLY.
                                                                                                                                                                   POLY-SER.
POLY-SER.
                                                                                                                                                                                           POLY-GLN.
POLY-ASN.
                                                                                                                                                                                                                                    CHARGE RELAY
                                                                          POLY-PRO
                                                                                                                                                                                                                                            POTENTIAL
                                                                                                                                                                                                                                                    POTENTIAL.
                                                                                                                                                                                                                                                            POTENTIAL.
                                                                                                                                                                                                                                                                            POTENTIAL.
                                                                                  POLY-GLN
                                                                                                                                                                                                                                                                                                            PRESTALK-SPECIFIC
                                                                                                                                                                                                           (POTENTIAL).
                                                                                                                                                                                                                                                                                            TRANSPORTER
                                                                                                                                                                                                                                                                                                                                                                    FALSE_NEG
                                                                                                                                                                                                                  Y SYSTEM
Y SYSTEM
Y SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Usage
                                                                                                                                                                                                                                                                                                            PROTEIN TAGB
3C
.) (POTENTIAL).
) (POTENTIAL).
                                                                                                                                                                                                                   (BY
(BY
(BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             þу
                                                                                                                                                                                                                                                                                                                                    Transmembrane;
                                                                                                                                                                                                                  ( SIMILARITY).
( SIMILARITY).
( SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             commercia.
```

Best Local

Similarity

18 25

. 48;

Score Pred.

71; No. æ DB 3.2;

1.

Length 1905;

Matches .18;

Conservative

15;

Mismatches

ω ω

Indels

0

Gaps

0

Query Match

```
RESULT 13
                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ъ
 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                            CARBOHYD
CARBOHYD
CARBOHYD
DISULFID
DISULFID
SEQUENCE
                                                                                                                DOMAIN
CARBOHYD
                                                                                                                                       SIMILAR
DOMAIN
                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for contending the statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
                                                                                                                                                             CHAIN
                                                                                                                                                                         SIGNAL
                                                                                                                                                                                   Glycoprotein;
                                                                                                                                                                                                                   FLYBASE; FBgn0001114; Glt.
INTERPRO; IPR002018; -.
                                                                                                                                                                                                                                           EMBL; X53286; CAA37380.1; HSSP; P21836; 1MAH.
                                                                                                                                                                                                                                                                           entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Olson P.F., Fessler L.I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-OREGON-R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ephydroidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GLUTACTIN PRECURSOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-1994 (Rel. 30-MAY-2000 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLT_DROME
P33438;
                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                        PFAM; PF00135; COesterase;
                                                                                                                                                                                                                                                                                                                                                                                                                                       "Glutactin, a novel Drosophila basement with sequence similarity to serine esten EMBO J. 9:1219-1227(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fessler J.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=90214632;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A., AND PARTIAL SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                PTM: EXTENSIVELY O-GLYCOSYLATED AND ALSO PTM: FOUR TYROSINES ARE SULFATED. SIMILARITY: IN THE N-TERMINAL SECTION; BI
                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: NOT KNOWN. BINDS CALCIUM IONS. SUBCELLULAR LOCATION: BASEMENT MEMBRANES
                                                                                                                                                                                                                                                                                                                                                                     CARBOXYLESTERASE/LIPASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DQP 1864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PQQREYEDCRRHCEQQEPRLQYQCQRRCQEQQRQHGRGGDLMNPQRGGSGRYEEGEEKQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
 Similarity
                                                                                                                                                                                               PS00941;
                                            18
603
616
115
115
368
368
402
402
123
123
123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophilidae; Drosophila
                                                                                                                                                                                   Sulfatation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                             ۸Ą,
                                                                                                                                                                                              CARBOXYLESTERASE_B_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PubMed=2108864;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              39,
28,
                                                        1023
602
615
1023
115
368
402
810
145
316
18.7%;
27.3%;
                                             118412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nelson
                                         GLU/GLN-RICH.

N-LINKED (GLCNAC. ..)

SY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.

BY SIMILARITY.
                                                                                                                                                                                                        Ν
                                                                                                                                                                                  Calcium-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20;
 Score 70; Pred. No.
                                                                                                                                                 WITH
                                                                                                                                       POLY-THR.
                                                                                                                                                             GLUTACTIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₩.E.,
                                                                                                                                                 TYPE-B CARBOXYLESTERASE/LIPASES
                                                                                                                                                                                                                                                                                                                                                                                                                                                   esterases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
  υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sterne R.E.,
          DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                             membrane-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA
                                                                                                                                                                                                                                                                                      . Usage by and for commercial http://www.isb-sib.ch/announce/
          1;
                                                                                                                                                                                                                                                                                                                                                                                 BELONGS
                                                                                                                                                                                  Signal
                                                                                                                                                                                                                                                                                                                                                                                                      N-GLYCOSYLATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17;
          Length 1023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              000000000000000000 186
                                             CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                            (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                 ТО
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Campbell A.G
                                                                                                                                                                                                                                                                                                                                                                                THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                 TYPE-B
                                                                                                                                                                                                                                                                                                                                     a collaboration - MBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                   outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                                                                             ņ
                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲.
```

```
RESULT 14
NIT4_NEUCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
 DOMAIN
CONFLICT
CONFLICT
SEQUENCE
                                                   DOMAIN
DOMAIN
                                                                                                                                                                                                                 PIR;
PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-DEC-1992 (Rel. 24, Createu, 01-DEC-1992 (Rel. 24, Last sequence update) 01-NOV-1997 (Rel. 35, Last annotation update) 01-NOV-1997 (Rel. 35, Tast annotation factor NIT-4:
                                                                                      DOMAIN
DOMAIN
                                                                                                                                     PROSITE; PS00463; ZN2_CY6_FUNGAL_1; 1.
PROSITE; PS50048; ZN2_CY6_FUNGAL_2; 1.
Transcription regulation; Activator; DNA-binding; Nuclear protein;
                                                                                                                                                                                                     HSSP;
                                                                                                                                                                                                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                        modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                     the European Bioinformatics Institute. The by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Molecular characterization of mutations of nit-4, the pathway-specific regulatory gene which controls nitrate assimilation in Neurospora crassa.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mol.
                                                                                                                                                                        PFAM; PF00172; Zn_clus;
                                                                                                                                                                                                                                          EMBL; M80368; AAA33602.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WEDLINE=92017855; PubMed=1840634;
Yuan G.-F., Fu Y.-H., Marzluf G.A.;
"nit-4, a pathway-specific regulatory gene of Neurospora crassa,
encodes a protein with a putative binuclear zinc DNA-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Neurospora
Eukaryota;
                                                                                                                DNA_BIND
                                                                                                                                                                                        INTERPRO; IPR001138; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yuan G.-F., Marzluf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=92149315; PubMed=1531376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIT4_NEUCR
                                                                                                                          inc; Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         776 QPDDNP 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Neurospora crassa
                                                                                                                                                                                                                                                                                                                                                                                                                  . MICTODIOI. 5:67-73 (1992).
FUNCTION: PATHWAY-SPECIFIC REGULATORY GENE OF ASSIMILATION; IT ACTIVATES THE TRANSCRIPTION C NITRATE AND NITRITE REDUCTASES.
SUBCELLULAR LOCATION: NUCLEAR.
                                                                                                                                                                                                                                                                                                                                                                          GENE EXPRESSION. SIMILARITY: CONTAINS A ZN(2)-CYS(6), FUNGAL-TYPE BINUCLEAR
                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN: THE GLUTAMINE-RICH DOMAIN MIGHT FUNCTION IN ACTIVATING
                                                                                                                                                                                                                A41696; A41696.
S20033; S20033.
                                                                                                                                                                                                                                                                                                                                                                     CLUSTER DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cell. Biol. 11:5735-5745(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Microbiol. 6:67-73(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KQSDNP 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ERIRQQQEREQYEREQQEREQREREELERQQREREQQQPEQQPEYNPEPVNPWGYPVQEP 775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KRDPQQREYEDCRRHCEQQEPRLQYQCQRRCQEQQRQHGRGGDLMNPQRGGSGRYEEGEE
                                                                                                                                                                                                     P07272; 1PYI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        crassa.
Fungi;
                                       53
121
213
429
672
755
992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
  A,
             450
754
859
1024
98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ascomycota;
                                                                                      139
229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G.A.;
                                                                                                                            Nitrate
   120244
                                                                                                                                                                                                                                          .'
  .
.
.
.
.
.
.
.
.
.
.
.
.
.
                                    GLN-RICH.
POLY-GLN.
                                                                                                                          assimilation.
                                                                PRO-RICH
                                                                           ASP/GLU-RICH
                                                                                       ASP/GLU-RICH
                                                                                                  ASP/GLU-RICH
                                                                                                            ZN(2)-CYS(6), FUNGAL-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sordariales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                          v
               Ý
* KP (IN REF. 1).
* S (IN REF. 1).
881D89172EDD6114 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.090 AA
                                                                                                                                                                                                                                                                                                   There are no restrictions ong as its content is in
                                                                       (ACIDIC).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sordariaceae; Neurospora
                                                                                                                                                                                                                                                                                         Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                          F NITRATE
OF THE GENES
                                                                                                                                                                                                                                                                                         bу
                                                                                                                                                                                                                                                                                          and for commercial
                                                                                                                                                                                                                                                                                                                                EMBL
                                                                                                                                                                                                                                                                                                                                         collaboration
                                                                                                                                                                                                                                                                                                                               outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                             FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                  on
                                                                                                                                                                                                                                                                                                      50
```

```
STATE TATE TO THE TENT OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LP61_EIMTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
REPEAT
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LP61_EIMTE
P15714;
01-APR-1990
01-APR-1990
                                                                                                                                                                                                                                                     REPEAT
REPEAT
                                                           REPEAT
REPEAT
                                                                                                     REPEAT
REPEAT
                                                                                                                                                REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                       Antigen;
NON_TER
                                                                                                                                                                                                              REPEAT
REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Identification and characterization of a target antigen of a monoclonal antibody directed against Eimeria tenella merozoites."; Mol. Biochem. Parasitol. 41:53-64 (1990).
-i- FUNCTION: UNKNOWN. THE GLN-RICH TANDEM REPEATS MAY BE IMPORTANTED AN UNKNOWN. ASPECT OF THE PARASITIC LIFE CYCLE. MAY BE AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-APR-1990 (Rel. 14, Created)
01-APR-1990 (Rel. 14, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation updata ANTIGEN LPMC-61 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                    EMBL; M30933; AAA29
PIR; A60637; A60637
                                                                                                                                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -i- SUBUNIT: MAY BE COVALENTLY LINKED BY DISULFIDE BONDS TO OTHER POLYPEPTIDES TO FORM THE 80 KDA ANTIGEN.
-i- DEVELOPMENTAL STAGE: PRESENT IN ALL STAGES THROUGHOUT THE
                                                                                                                                                                                            REPEAT
                                                                                                                                                                                                                                                                                                                      DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ko C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eimeria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Alveolata; Apicomplexa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eimeria tenella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=90348718; PubMed=2200963;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE=SPOROZOITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 QREYEDCRRHCEQQEPRLQYQCQRRCQEQQRQHGRGGDLM----NPQRGGSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EXCYSTATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SPORULATION OF THE OCCYSTS AND IN THE SPOROZOITES FOLLOWING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMPORTANT IMMUNOGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith C.K. II, McDonell M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                Sporozoite; Repeat;
                                                           18
49
58
66
79
79
104
141
153
165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                        AAA29079.1;
ĄΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
255
31267
                                       48
57
65
78
90
103
140
152
152
172
172
192
                                                                                                                                                                                                                                                                                                                      210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18.7%;
WW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14;
                                          8.
9.
10
11
12
                                                                                                                                                                                                                                                                                                  12 X
RICH.
                                                                                                                                                                                                                                                                                                                                                                Sporulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
8C5E6005FFFC2DB3 CRC64;
                                                                                                                                                                                                                                                                                                                      X APPROXIMATE TANDEM REPEATS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Coccidia; Eimeriida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MAY BE IMPORTANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             restrictions on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eimeriidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.
                                                                                                                                                                                                                                                                                                                      GLN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲.
```

Query Match Best Local Matches

l Similarity 17; Conser

Conservative

9;

Mismatches

18.5%; 37.0%;

Score 69.5; Pred. No. 1

DВ 19;

1;

Length 255; Indels

1.

Gaps

٠,

Search Job ti	Qy Db
Search completed: March 1, 2001, 16:16:50 Job time: 430 sec	4 PQQREYEI    : 80 PQQQPQM
March	OCRRHCE ; )-QEQWP
1,	00E
2001,	PRLQYQO  ::    PQVQQQQ
16:16:50	4 PQQREYEDCRRHCEQQEPRLQYQCQRRCQEQQRQHGRGGDLMNPQR 49     :
	49 124